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## Compact Java binaries for embedded systems

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### ↑ ABSTRACT

Embedded systems bring special purpose computing power to consumer electronics devices players and pagers. Java is being aggressively targeted at such systems with initiatives such as Micro Edition, which introduces certain efficiency optimizations to the Java Virtual Machine. It is identified as an important future goal for ensuring Java's success on embedded systems [20] that processing power and timing constraints often make traditional compression techniques untenable. We must meet the conflicting requirements of size reduction and execution performance. We present a file format for Java binaries that achieve significant size reduction with little or no performance penalty. Tests conducted on several large Java class libraries show a typical 25% size reduction for class files and 10% for JAR files.

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E. Data

↳ E.4 CODING AND INFORMATION THEORY

↳ Subjects: Data compaction and compression

### Additional Classification:

D. Software

↳ D.3 PROGRAMMING LANGUAGES

### ➤ D.3.2 Language Classifications

➤ Nouns: Java

### ➤ D.4 OPERATING SYSTEMS

#### ➤ D.4.7 Organization and Design

➤ Subjects: Real-time systems and embedded systems

#### General Terms:

Algorithms, Design, Experimentation, Measurement, Performance, Theory

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